Amendments to the Claims

Claims 1-18. (Withdrawn)

19. (Currently Amended) A substrate, comprising:

(i) a surface layer comprising gold, and

(ii) a plurality of moieties, on at least a portion of said surface layer,

wherein said moieties are alkanethiolate moieties of formula (5) or ~~and~~ enantiomers of the alkanethiolate moieties of formula (5):

Surf——S——L——Q——T (5);

-L- is $-(A_x-B_y-E_z-D)_w-$;

each A, B, E and D are individually $C(R_AR_A')$-, $-C(R_BR_B')$-, $-C(R_ER_E')$-, and $-C(R_DR_D')$-, respectively;

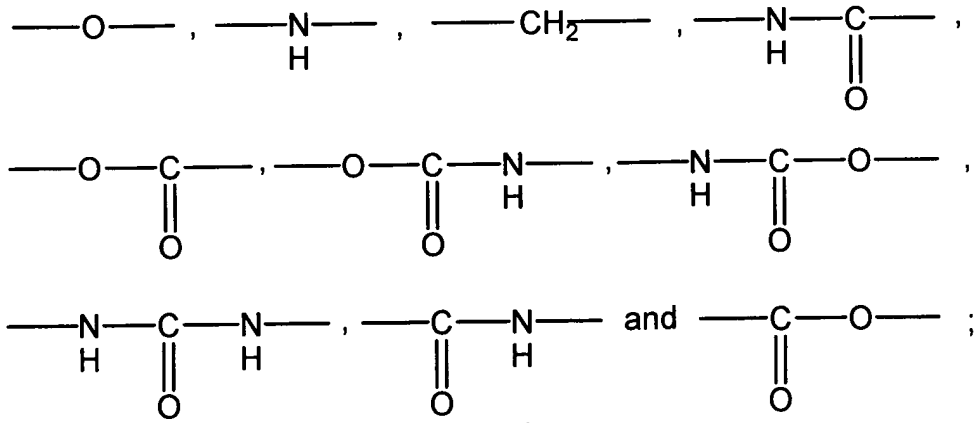
each R_A, R_B, R_E and R_D are individually H, or any two of R_A, R_B, R_E and R_D together form a bond, or R_A, R_B, R_E and R_D together with the atoms to which they are bonded form a six-membered aromatic ring;

each R_A', R_B', R_E' and R_D' are individually H, or any two of R_A', R_B', R_E' and R_D' together form a bond, or R_A', R_B', R_E' and R_D' together with the atoms to which they are bonded form a six-membered aromatic ring;

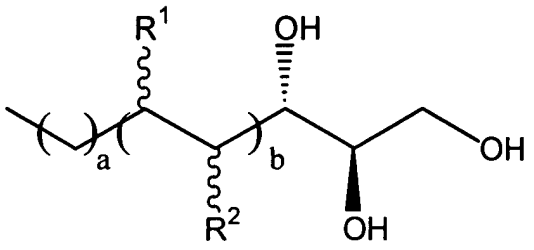
each x, y and z are individually either 0 or 1;

w is 1 to 5;

-Q- is selected from the group consisting of



-T is a moiety of formula (2)



(2);

R^1 and R^2 are each individually selected from the group consisting of H and OH;

a is 0 to 3;

b is 0 to 3;

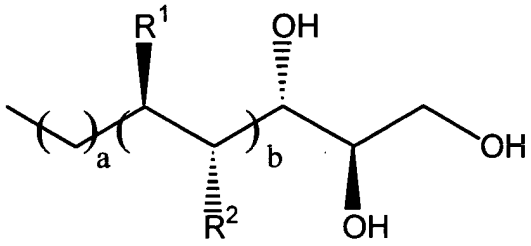
~~~~ indicates that the chirality of the carbon atom to which it is attached is either R or S; and

Surf designates where the moiety attaches to said surface.

20. (Original) The substrate of claim 19, further comprising:
(iii) a monolayer comprising said moieties,
wherein said monolayer does not fail a cell patterning test at 12 days.

21. (Original) The substrate of claim 19, further comprising:
(iv) a base,
wherein said surface layer is on said base.

22. (Original) The substrate of claim 21, wherein -T is a moiety of formula (2')



(2').

23. (Original) The substrate of claim 22, wherein a is 1, b is 1 and at least one of R^1 and R^2 is OH.
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24. (Original) The substrate of claim 22, wherein -L- contains 8 to 18 carbon atoms.

25. (Original) The substrate of claim 24, wherein -L- contains 1 or 0 double bonds, or 1 triple bond.

B1 26. (Original) The substrate of claim 22, wherein -L- is an alkylene containing 6 to 18 carbon atoms.

27. (Original) The substrate of claim 22, wherein -Q- is -O- or $-CH_2-$.

28. (Original) The substrate of claim 23, wherein -L- is an alkylene containing 6 to 18 carbon atoms, and -Q- is -O-.

29. (Original) A substrate, comprising:

(i) a surface layer comprising gold, and

(ii) a monolayer comprising moieties, on at least a portion of said surface layer,

wherein said moieties are alkanethiolate moieties; and

said monolayer does not fail a cell patterning test at 12 days.

30. (Original) A cell chip, comprising:

(A) the substrate of claim 19, and

(B) cells, on said substrate.

31. (Original) A cell chip, comprising:

(A) the substrate of claim 20, and

(B) cells, on said substrate.

32. (Original) A cell chip, comprising:

(A) the substrate of claim 22, and

(B) cells, on said substrate.

33. (Original) A cell chip, comprising:
(A) the substrate of claim 24, and
(B) cells, on said substrate.

34. (Original) A cell chip, comprising:
(A) the substrate of claim 26, and
(B) cells, on said substrate.

35. (Original) A cell chip, comprising:
(A) the substrate of claim 28, and
(B) cells, on said substrate.

36. (Original) A cell chip, comprising:
(A) the substrate of claim 29, and
(B) cells, on said substrate.

Claims 37-40. (Withdrawn)

41. (Currently Amended) A method of making a substrate, comprising contacting a surface with an alkanethiol of formula 1 or ~~and~~ the enantiomers ~~enantimomers~~ of formula (1);

HS——L——Q——T (1),

wherein -L- is $-(A_x-B_y-E_z-D)_w-$;

each A, B, E and D are individually $C(R_AR_A')$-, $-C(R_BR_B')$-, $-C(R_ER_E')$-,and $-C(R_DR_D')$-, respectively;

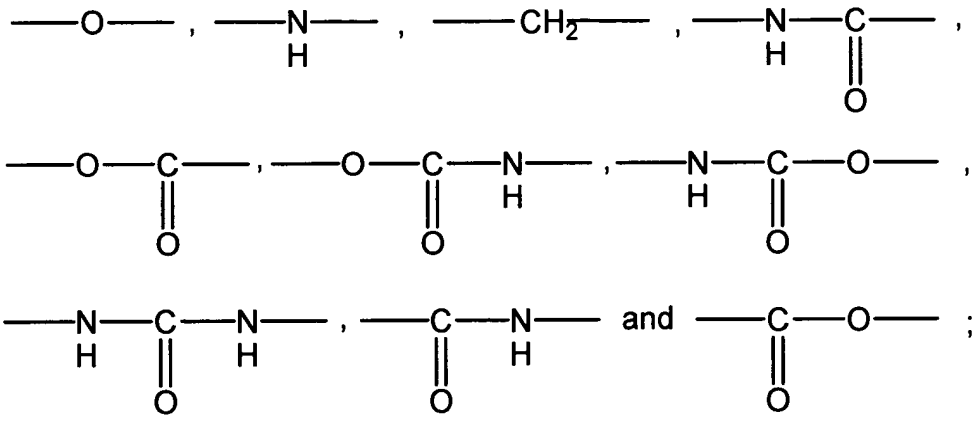
each R_A, R_B, R_E and R_D are individually H, or any two of R_A, R_B, R_E and R_D together form a bond, or R_A, R_B, R_E and R_D together with the atoms to which they are bonded form a six-membered aromatic ring;

each R_A', R_B', R_E' and R_D' are individually H, or any two of R_A', R_B', R_E' and R_D' together form a bond, or R_A', R_B', R_E' and R_D' together with the atoms to which they are bonded form a six-membered aromatic ring;

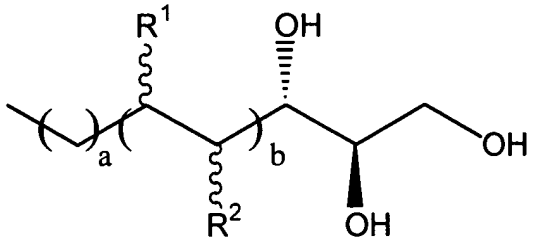
each x, y and z are individually either 0 or 1;

w is 1 to 5;

-Q- is selected from the group consisting of



-T is a moiety of formula (2)



(2);

R^1 and R^2 are each individually selected from the group consisting of H and OH;

a is 0 to 3;

b is 0 to 3; and

~~~ indicates that the chirality of the carbon atom to which it is attached is either R or S;

wherein said surface comprises gold.

42. (Cancelled)

43. (Currently Amended) The ~~A~~ method of claim 41, ~~making a substrate, comprising contacting a surface with the alkanethiol of claim 2;~~

wherein ~~said surface comprises gold~~ -T is a moiety of formula (2')
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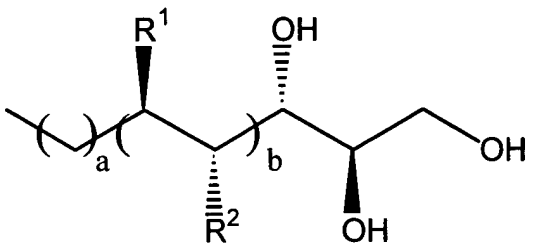

(2').

44. (Currently Amended) The ~~A~~ method of claim 43 ~~making a substrate, comprising contacting a surface with the alkanethiol of claim 8;~~

wherein ~~said surface comprises gold~~ a is 1, b is 1, at least one of R^1 and R^2 is OH, -L- is an alkylene containing 6 to 18 carbon atoms, and -Q- is -O-.

Claims 45-48. (Withdrawn)

49. (Original) A method of making a cell chip, comprising:

contacting cells with the substrate of claim 19.

50. (Original) The method of claim 49, further comprising allowing said cells to proliferate.

51. (Original) A method of making a cell chip, comprising:

contacting cells with the substrate of claim 20.

52. (Original) The method of claim 51, further comprising allowing said cells to proliferate.

53. (Original) A method of making a cell chip, comprising:

contacting cells with the substrate of claim 22.

54. (Original) The method of claim 53, further comprising allowing said cells to proliferate.

55. (Original) A method of making a cell chip, comprising:

contacting cells with the substrate of claim 28.

56. (Original) The method of claim 55, further comprising allowing said cells

to proliferate.

57. (Original) A method of making a cell chip, comprising:

contacting cells with the substrate of claim 29.

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58. (Original) The method of claim 57, further comprising allowing said cells to proliferate.